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| 10/690,251 | 10/20/2003 | Terrence Brown | | 3427 |

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Terrence A. Brown
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EXAMINER

PALADINI, ALBERT WILLIAM

| ART UNIT | PAPER NUMBER |
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2125

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/690,251

Applicant(s)

BROWN ET AL.

Examiner

Albert W. Paladini

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-12 are rejected under 35 U.S.C. 101 because

the claimed invention is directed to non-statutory subject matter. A mathematical equation is categorized as an abstract idea and is not patentable. MPEP 2106 states

“No mathematical equation can be used, as a practical matter, without establishing and substituting values for the variables expressed therein. Substitution of values dictated by the formula has thus been viewed as a form of mathematical step. If the steps of gathering and substituting values were alone sufficient, every mathematical equation, formula, or algorithm having any practical use would be per se subject to patenting as a “process” under 101. Consideration of whether the substitution of specific values is enough to convert the disembodied ideas present in the formula into an embodiment of those ideas, or into an application of the formula, is foreclosed by the current state of the law.

For such subject matter to be statutory, the claimed process must be limited to a practical application of the abstract idea or mathematical algorithm in the technological arts. See *Alappat*, 33 F.3d at 1543, 31 USPQ2d at 1556-57 (quoting *Diamond v. Diehr*, 450 U.S. at 192, 209 USPQ at 10). See also *Alappat* 33 F.3d at 1569, 31 USPQ2d at 1578-79 (Newman, J., concurring) (“unpatentability of the principle does not defeat

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patentability of its practical applications”) (citing O ’Reilly v. Morse, 56 U.S. (15 How.) at 114-19). A claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is concrete, tangible and useful. See AT &T, 172 F.3d at 1358, 50 USPQ2d at 1452. Likewise, a machine claim is statutory when the machine, as claimed, produces a concrete, tangible and useful result (as in State Street, 149 F.3d at 1373, 47 USPQ2d at 1601) and/or when a specific machine is being claimed (as in Alappat, 33 F.3d at 1544, 31 USPQ2d at 1557 (* en banc)).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Referring to figure 2, paragraph 13 on page 9 states “The application server will utilize a mathematical equation (200) to calculate whether there is available space in the

rack (10) to fit the equipment (20) to be added to the rack (10). The item labeled (200) is in figure 3, not figure 2, and it is the question "Do you want to remove additional equipment from this rack?". The applicant does not explain how a mathematical equation can determine if there is available space. A mathematical equation has one or more variables in a relationship. Frequently, there is one dependent variable and one or more independent variables. If objects of varied shapes are inserted into a rack in available positions, it is not understood how a mathematical equation can account for each object and determining if there is additional space. The equation must somehow contain information about the size and shape of the available space, the size and shape of each object and its possible locations within the available space. The equation must also contain involve the size, shape, and location of any objects present in the rack, and the possible added equipment. An equation would have to dynamically react to the placement of each element and calculate the shape and details of the remaining space. The applicant needs to provide an example demonstrating the use of an equation for inserting a first element to a space whose spatial parameters are also contained in the space, then calculating the location and shape of the remaining space. Then, the applicant must demonstrate how this equation calculates the remaining size and shape of the space for the sequential insertion of objects. The flow charts and the accompanying description explain what appears to be a thought process that an individual would invoke in filling and adding racks. The use of an equation in this process is not explained.

Appropriate correction and clarification are required.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1

The claim does not recite logical sequential steps to perform a specific objective. In the first step, a "mathematical equation" somehow maintains or manages space. It is not understood how this is accomplished. Four steps of entering data follow this step. The steps do not provide a structured methodology for accomplishing anything.

Appropriate correction and clarification are required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knoblock (6169987).

In figure 2, and (C8, Knoblock L28-49) discloses the organization of equipment into spaces within racks and shelves. In (C20, L13-24), (C20, L62-65), (C21, L40-51), and (C22, L9-23), Knoblock discloses the use to placement tool 116 to calculate available space, and to use utilize the dimensions of stored equipment to calculate available space after each piece of equipment is placed in a rack. Knoblock does not explicitly disclose the use of an equation, as recited in claim 1.

As demonstrated in paragraphs 1-5, the Applicant does not demonstrate how an equation may be utilized. In order to perform a calculation to determine available space as performed in (C20, L13-24), (C20, L62-65), (C21, L40-51), and (C22, L9-23); it would have been obvious to one of ordinary skill in the art that at least one equation would be utilized to subtract the available space from the equipment size for each dimension, thus meeting the *Graham v. John Deere* criteria.

Relevant Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Haag (6662077) discloses architecture for management of an automated parking facility, which includes a facility website, to determine if there is available rack space for a particular facility.

Kobayashi (JP406024528A) discloses a cargo-supplying device which uses a cargo detecting sensor in conjunction with a control device to determine if a flow rack has dead space for accepting cargo.


Hatouchi (JP410067412A) discloses a system for improving accommodation efficiency of a rack with support pillar frames, where an equation containing the cargo dimensions is used to determine the positions of the pillar frames for efficient storage of the cargo to be stored.

10. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (571) 272-3748. The examiner can normally be reached from 7:00 to 3:00 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (571) 272-3749. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

July 5, 2006


Albert W. Paladini
Primary Examiner
Art Unit 2125